W1
Ultra-compact two-way trapezoid system

features
- Ultra-compact trapezoid enclosure
- High SPL output capability
- 70º coverage angle
- Multi-laminate birch plywood construction
- 10" (250mm) LF/1" (25mm) HF driver combination

applications
- Audio-visual presentations
- Theatre sound systems
- Club sound reinforcement
- Distributed sound systems
- Live sound infill system

The Martin W1 Wavefront system is a high performance, ultra-compact loudspeaker designed for specific applications where both high output capability and small size are required. Typical uses include audio-visual presentations and theatre sound. The W1 features a 10" (250mm) bass driver and 1" (25mm) exit compression driver housed in a rugged plywood enclosure built using the same construction techniques as larger Martin touring systems. Its 2-way passive configuration simplifies operation, ensures predictable system performance and reduces amplifier count.

The 70º, medium Q horizontal coverage angle of the W1 allows it to be used either as a portable stand alone system, or as a component in distributed systems or multiple arrays. The W1 has been engineered to combine dynamic high level reproduction with a wide bandwidth, accuracy and maximum intelligibility.

Optimum performance of the W1 is achieved when used with a system controller configured for the W1 to perform system specific equalisation and limiter functions.

Because the W1 is a passive full-range system embodying correct acoustic design principles, it may be used without a controller in certain instances - provided recommended amplifier power is not exceeded and care is taken to avoid amplifier clipping and excessive low frequencies below 75Hz.

For applications where ultra-low frequency enhancement is required, a Wavefront Series sub-bass system can be used in conjunction with the W1 and a system controller to extend the power bandwidth of the system to below 35Hz.

To simplify installation, threaded steel inserts are fitted into the enclosure for the fixing of rigging hardware. A perforated steel grille protects the drive units in transit and a single rear handle allows the W1 to be carried with one hand.
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Polar plots

W1 Vertical
- 63Hz & 1/3 oct smoothing
- 160Hz & 1/3 oct smoothing
- 630Hz & 1/3 oct smoothing
- 3200Hz & 1/3 oct smoothing
- 12800Hz & 1/3 oct smoothing

W1 Horizontal
- 63Hz & 1/3 oct smoothing
- 160Hz & 1/3 oct smoothing
- 630Hz & 1/3 oct smoothing
- 3200Hz & 1/3 oct smoothing
- 12800Hz & 1/3 oct smoothing
Ultra-compact two-way trapezoid system

W1

frequency responses

W1 Horizontal Magnitude in dB SPL/2.83V at 1 meter

W1 Horizontal Beamwidth

W1 Vertical Beamwidth
Ultra-compact two-way trapezoidal system

**Overall Dimensions**

- Width: 335mm [13.19”]
- Height: 487mm [19.17”]
- Depth: 180mm [7.09”]

**W1**
## Technical Specifications

| Type | Ultra-compact two-way passive trapezoid |
| FREQUENCY RESPONSE (5) | 75Hz-18kHz ±3dB @ 55Hz |
| DRIVERS | 10" (250mm) bass driver, 1" (25mm) exit HF compression driver |
| RATED POWER (2) | 150W AES, 600W peak |
| RECOMMENDED AMPLIFIER | 300-400W into 4 ohms |
| SENSITIVITY (6) | 97dB |
| MAXIMUM SPL (7) | 118dB continuous, 124dB peak |
| NOMINAL IMPEDANCE | 8 ohms |
| DISPERSION (-6dB) | 70º horizontal, 40º vertical |
| CROSSOVER | 2.2kHz passive |
| FINISH | Textured grey paint |
| PROTECTIVE GRILLE | Grey perforated steel |
| CONNECTORS | 2 x Neutrik NL4 |
| FITTINGS | 12 x M8 threaded inserts, 1 x mounting pole socket |
| DIMENSIONS | (W) 335mm x (H) 487mm x (D) 325mm (W) 13.2ins x (H) 19.2ins x (D) 12.8ins |
| WEIGHT | 14.5kg (32lbs) |

## Architectural and Engineering Specifications

The loudspeaker system shall be of the two-way passive type consisting of one 10" (250mm) direct radiating reflex loaded low frequency transducer and one 1" (25mm) exit HF compression driver mounted in a trapezoidal plywood enclosure. The enclosure shall be fitted with an integral pole mounting socket and threaded inserts for wall and ceiling mounting. Low and high frequency sections shall be integrated by an internal 2.2kHz passive crossover network.

Performance of the loudspeaker system with its electronic controller shall meet or exceed the following criteria:

- Frequency response measured 1 metre on axis shall be 75Hz-18kHz ±3dB.
- High frequency dispersion at -6dB points shall be 70°H x 40°V.
- Power handling shall be 150W AES, 600W peak.
- Rated impedance shall be 8 ohms.
- Maximum SPL measured at 1 metre on axis shall be 118dB continuous, 124dB peak.
- Dimensions: (W) 335mm x (H) 487mm x (D) 325mm (13.2ins x 19.2ins x 12.8ins).
- Weight: 14.5kg (32lbs).

The loudspeaker system shall be the Martin Audio W1.

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**Notes**

1. Measured on-axis in half space at 2 metres, then referred to 1 metre.
3. Measured in half space at 2 metres with 1 watt input, then referred to 1 metre.
4. Measured in half space at 2 metres using band limited pink noise, then referred to 1 metre.
5. Measured on-axis in open (4π) space at 2 metres, then referred to 1 metre.
6. Measured in open (4π) space at 2 metres with 1 watt input, using band limited pink noise, then referred to 1 metre.
7. Measured in open (4π) space at 2 metres using band limited pink noise, then referred to 1 metre.

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**Trade Descriptions Act**

Due to Martin Audio’s policy of continuous improvement, we reserve the right to alter these specifications without prior notice.

Martin Audio is committed to refining the art of sound reinforcement, combining in-depth product and field applications research with advanced manufacturing techniques. Every Martin Audio product is built to the highest manufacturing standards and rigorously tested to ensure that it meets the performance criteria specified in the design.